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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Marta Karczewicz

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EXAMINER

RAO, ANAND SHASHIKANT

ART UNIT

PAPER NUMBER

2613

2

DATE MAILED: 08/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/925,769

Applicant(s)

KARCZEWICZ ET AL.

Examiner

Andy S. Rao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-9, 13-18 and 25-27 is/are allowed.
- 6) ☒ Claim(s) 1-5, 10-12 and 19-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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3. Claims 1-5, 10-12, 14-16, 19-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Martin.

Martin discloses a picture data signal embodied in a carrier wave for the reconstruction of video frames (Martin: column 1, lines 19-35), said picture data signal comprising: data blocks encoded using spatial correlation among the pixels (Martin: column 6, lines 30-35); data blocks encoded using both spatial and temporal correlation (Martin: column 7, lines 30-52); and providing identical reconstruction of said video frames even when different reference frames are used (Martin: column 4, lines 12-20), as in claim 1.

Regarding claim 2, Martin discloses that the value of each pixel $S(x,y)$ in the inter or copy coded block is decoded as a weighted sum of a plurality of basis functions whose weight values are obtained by quantization and dequantization of a plurality of reconstruction image coefficients formed using motion compensation prediction of this block constructed using previously transmitted and decoded pictures, received motion vectors and received quantized prediction error coefficients, (Martin: column 7, lines 45-50), as in the claim

Martin discloses a picture data structure for the reconstruction of video frames, said picture data structure (Martin: column 1, lines 35-46) comprising: data blocks encoded using spatial correlation among the pixels (Martin: column 6, lines 30-35); and data blocks encoded using both spatial and temporal correlation (Martin: column 7, lines 30-52), and providing identical reconstruction of frames even when different reference frames are used (Martin: column 4, lines 12-20), as in the claim 3.

Regarding claim 4, Martin discloses that the value of each pixel $S(x,y)$ in the inter or copy coded block is decoded as a weighted sum of a plurality of basis functions whose weight

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values are obtained by quantization and dequantization of a plurality of reconstruction image coefficients formed using motion compensation prediction of this block constructed using previously transmitted and decoded pictures, received motion vectors and received quantized prediction error coefficients (Martin: column 7, lines 45-50), as claim 4.

Martin discloses a method of coding a switching picture S.sub.12 for switching from a first bitstream having a Sp-picture Sxsub.1 to a second bitstream having a second Sp-picture S.sub.2 (Martin: figure 5), said method comprising the steps of: copying the bitstream of the intra macroblocks in second Sp-picture S.sub.2 to switching picture S.sub.12' (Martin: column 4, lines 15-20), and encoding remaining macroblocks comprising the steps of: forming a predicted frame for S.sub.12 by performing motion estimation with a plurality of reference pictures which are preceding S.sub.1 in said first bitstream' (Martin: column 4, lines 25-30), calculating a set of transform coefficients for predicted image c.sub.pred by performing a forward transform (Martin: column 7, lines 45-50); quantizing the obtained transform coefficients to resulting in quantized coefficient levels (Martin: column 8, lines 25-30); and subtracting said quantized coefficient levels from a set of corresponding coefficient levels of said second Sp-picture S.sub.2 (Martin: column 4, lines 10-15), as in claim 5.

Martin discloses a decoder for decoding a block of encoded data (Martin: figure 6) wherein identical frames may be obtained even when they are predicted using different reference frames (Martin: column 4, lines 15-20), said decoder comprising: a frame memory for storing a reference frame (Martin: figure 6, element 95); demultiplexer for receiving and demultiplexing said encoded data into motion information and current frame information (Martin: figure 6, element 91), motion compensation predictor coupled to said demultiplexer and said frame

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memory for receiving said motion information and constructing a prediction of the current block based on said motion information and reference frame (Martin: figure 8, element 96); transformer coupled to said motion compensation predictor for creating a plurality of transform coefficients (Martin: figure 6, element 94), quantizer coupled to said transformer for quantizing said plurality of coefficients (Martin: figure 6, element 93); adder coupled to said quantizer and said demultiplexer for adding current frame information and said quantized plurality of coefficients to form a plurality of coefficients for a reconstructed frame (Martin: figure 6, element 97); inverse quantizer coupled to said adder and inverse transformer coupled to said inverse quantizer (Martin: column 8, lines 30-35), as claim 10.

Regarding claims 11-12, Martin discloses using a normalizer (Martin: column 4, lines 18-21), as in the claims.

Martin discloses a method for switching between a plurality of bitstreams in a data communication system (Martin: figure 5), wherein said bitstreams correspond to a same data sequence but are encoded at different bitrates (Martin: column 3, lines 40-65), said method comprising the steps of: placing a first Sp-picture within a first bitstream in a location at which switching from a second bitstream to said first bitstream is desired (Martin: column 3, lines 12-20), transmitting a second Sp-picture wherein said first Sp-picture and said second Sp-picture are represented by different bitstreams (Martin: column 4, lines 25-31), but wherein said first Sp-picture reconstructed values and said second SP- picture reconstructed values are identical (Martin: column 4, lines 32-43), as in claim 19.

Martin discloses a method for enabling access in a data stream (Martin: figure 5), said method comprising the steps of: placing a plurality of Sp-pictures at fixed intervals within a first

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bitstream', generating an I-picture and an Sp-picture for each one of said plurality of Sp-pictures in said first bitstream (Martin: column 4, lines 14-20); storing said I-picture in a second bitstream at a temporal location preceding said each one of said plurality of Sp-pictures in said first bitstream (Martin: column 4, lines 20-25), and storing said Sp-picture in said second bitstream at same temporal locations as each of said Sp-pictures in said first bitstream (Martin: column 4, lines 25-35), as in claim 20.

Regarding claims 21 -22, Martin discloses that the second bitstream contains only Sp-pictures predicted from each other, but at longer temporal periods (Martin: column 4, lines 45-65), as in the claims.

Martin discloses a method for providing Video Redundancy Coding (VRC) (Martin: column 1, lines 25-35), comprising the steps of: dividing a sequence of pictures into a plurality of threads wherein all pictures are assigned to one of said plurality of threads in a round-robin fashion (Martin: column 3, lines 45-50); coding each of said plurality of threads independently; creating a Sp-picture, wherein all of said threads converge (Martin: column 4, lines 1-6); and starting a second plurality of threads from said Sp-picture (Martin: column 4, lines 15-37), as in claim 23.

Martin discloses method for providing error control in a data stream between a sender and a client in a communication system (Martin: figure 5), said method comprising: creating a plurality of representations of a picture in the form of a plurality of Sp-pictures predicted from different reference pictures (Martin: column 4, lines 15-35); signaling said sender information regarding lost pictures and a one of said plurality of representations received by said client (Martin: column 7, lines 45-50); and sending said client a Sp-picture which is the next picture in

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said one of plurality of representations received by client (Martin: column 8, lines 15-35), as in claim 24.

Allowable Subject Matter

4. Claims 6-9, 13-18, and 25-27 are allowed.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Le Roux discloses an MPEG stream switching process. Luthra discloses splicing of video data in progressively refreshed video streams. Wilkinson discloses processing digitally encoded signals. Saunders discloses a signal processor for splicing. Thoreau discloses an MPEG stream switching process.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy S. Rao whose telephone number is (703)-305-4813. The examiner can normally be reached on Monday-Friday 8 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris S. Kelley can be reached on (703)-305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Andy S. Rao
Primary Examiner
Art Unit 2613

ANDY RAO
PRIMARY EXAMINER

asr

August 11, 2004